

Michigan and Superior, night of the 17th, were lowered too soon; of those along the New Jersey and North Carolina coast, the latter were not justified. Maximum velocities—San Francisco, SW. 28; Pike's Peak, SW. 64 and NW. 56; Fort Bayard, N. M., SW. 43; Fort Craig, N. M., SW. 40; Denver, W. 50; Cheyenne, NW. 44; Colorado Springs, W. 60; North Platte, SE. 96 and W. 66; Dodge City, SE. 40 and SW. 52; Bismarck, E. 74 and N. 60; Breckenridge, E. 50; St. Paul, SE. 33; Duluth NE. 30; Marquette, SE. 36; Milwaukee and Port Huron, W. 36; Sandy Hook, W. 30; Thatcher's Island, W. 36; Mount Washington, NW. 102 miles. Warnings were sent, night of the 17th, for the Canadian stations on Lakes Huron and Erie.

Nos. VI and VII.—18th, the pressure rapidly diminished along the Pacific coast, with a high wind at Victoria, British Columbia. 19th, continued diminishing; barometers falling below normals 0.47 at San Francisco and 0.53 at Portland, Or. Light rains fell from Washington Territory to California. 20th, a. m. barometer at Salt Lake City 0.42 below normal, and diminishing pressure from the Missouri valley southward. The rain-area extended eastward partly as snow to Montana, Idaho, Utah and Arizona. 21st, p. m. barometer at Yankton 0.58 below normal. Threatening and rainy weather prevailed from the Upper Lakes to the Northwest, with frequent thunder-storms; severe hail-storms in Iowa and Illinois; tornado in northwestern Iowa. 22nd, it appeared as an extensive barometric trough, reaching from Minnesota to Texas, and No. VII developed. Rainy weather was reported from the Southwest to the Northwest and Lake region. 23rd, generally light rains fell in the Lake region; frequently very heavy rains and destructive thunder-storms, with hail, from the lower Ohio valley and Missouri to Alabama and eastern Texas; tornadoes at Corsicana, Texas, and Green Springs, Alabama. 24th, passed northward over Lower Michigan, but with frequent rains and heavy thunder-storms from the Lake region southward; at Rome, Ga., a tornado; midnight barometer at Alpena 0.81 below normal. Cautionary Signals were ordered the 22nd for Lakes Superior and Michigan, but late, also from New Jersey to North Carolina; 23rd, for the Gulf coast, and from North Carolina to New Jersey; 24th, for the Lower Lakes and southern New England. Maximum velocities—San Diego, S. 32; Salt Lake City, S. 32; North Platte, E. 60; Bismarck, NE. 60; Cairo, SW. 55; Galveston, NW. 40; Cape Lookout, S. 72; Sandy Hook, E. 36; Cleveland, SW. 45; Detroit, S. 42; Duluth, NE. 38 miles.

No. VIII—developed the 25th in southern Michigan from No. VII. 26th, 27th and 28th thunder-storms were frequent in the Middle States, and heavy at places with hail. The last day very destructive hail storms occurred in southeastern Virginia, Maryland and Delaware. 29th, it was dissipated, as shown on the chart. Cautionary Signals on the New Jersey and New England coasts were not justified except at Eastport; those on the North Carolina coast were late. Maximum velocities—Capes Lookout and Hatteras, SW. 36; Eastport, NE. 35.

No IX—was not of much importance. Moderate rains fell in Cuba and southern Florida, accompanying thunderstorms, with very brisk southeast winds at Key West.

No. X.—Light rains accompanied this disturbance from the Northwest to the Upper Lakes, with occasionally high winds; Bismarck, W. 42; Breckenridge, NW. 35; Milwaukee, SW. 34 miles.

INTERNATIONAL METEOROLOGY.

STORMS.—*December* 31st—York Factory, Hudson's Bay, B. A., noon, heavy northerly gale commenced reaching a velocity of 47 miles at midnight, and from midnight to 2:45 a. m., January 1st, averaged 71 miles per hour, with squalls estimated at 100. At 2:45 a. m. the anemometer was blown away, and the following velocities were estimated: 2:45 a. m. to 6:33 a. m., average 50 miles, and 6:33 a. m. to 9 a. m., average 40 miles. It was preceded by fresh southerly winds on the 30th, and followed by cold and strong NW. winds until the 6th; the thermometer registering -33° on the morning of the 3rd, the lowest reading recorded during the months of December, January and February.

January—4th, 51° S., 81° W., heavy SE. winds. 8th, 49° N., 7° W., heavy sea. 21st, off San Francisco, 5:30 p. m., SE. gale, rain. 22nd, off San Francisco, 4:30 a. m., SE gale increased; 11 a. m., tremendous sea.

February—3rd, $28^{\circ}06'$ S., $53^{\circ}12'$ E., violent rotary gale, lasting a few hours. 7th, $29^{\circ}30'$ S., 44° E., terrific NE. gale, veering to NW. and ending at SW.; barometer 29.30; fearful cross-seas, lasting 16 hours; land and sea birds fell on deck exhausted. Tahiti, Society Islands, hurricane; 129 persons reported killed and much property destroyed. 10th, $57^{\circ}55'$ S., 64° W., heavy gales. 15th, $48^{\circ}54'$ N., $18^{\circ}30'$ W., heavy NW. to SW. gale. 16th, outer bank, off San Francisco, terrible gale, with seas mountain high. 20th, Fowey Rocks, Florida Reefs, 5 a. m., wind SSE. and heavy seas, driving steamer Arratoon on reefs.

March—4th, $41^{\circ}19'$ N., $52^{\circ}44'$ W., heavy SSW. gale, with tremendous sea; about 28° N., $67^{\circ}54'$ W., SE. gale going around to SW. and blowing furiously for 48 hours. 11th, $48^{\circ}08'$ N., $46^{\circ}35'$ W., 7:35 a. m., Wash., M. T., barometer 29.39, wind NW. 24 miles; 2 p. m., W. by N., 60 miles; 5:30 p. m., barometer 29.22, lowest point. 12th, 42° N., $44^{\circ}50'$ W., 7:35 a. m., Wash., M. T., barometer, 29.59, wind NW. 60 miles. 13th, 46° N., 45° W., hurricane from W., with heavy sea. 24th, $45^{\circ}17'$ N., $38^{\circ}47'$ W.,

heavy S. gale veering round to NW., lasting 6 hours. 25th, 41° 02' N., 65° 08' W., SSW. and WNW. very stormy. 26th, 41° 28' N., 65° 31' W., fresh W. gale, with heavy snow squalls; 40° 34' N., 70° 40' W., storm, snow and hail squalls. 27th, 43° 26' N., 46° 34' W., severe storm. 29th, 49° 22' N., 5° 43' W., 5 a. m., barometer 28.92 lowest; 7 a. m., furious gale from N. and E.; 9 a. m. to 11 p. m., velocity of wind estimated from 50 to 75 miles. 31st, 49° 35' N., 8° 30' W., N. and NW. stormy.

April—1st, 39° 30' N., 14° 25' W., NW. rising wind, heavy snow squalls. 2nd, 49° 26' N., 20° 15' W., moderate NW. gale, high sea, squally; 53° 28' N., 21° 49' W., fresh NW. gale and heavy hail showers; 49° 41' N., 7° 36' W., strong NW. breeze, heavy rain squalls. 4th, 26° 30' N., 69° W., SE. to NW. gale, lasting five days; 49° 50' N., 36° 26' W., strong ESE. gale; 49° 42' N., 11° 33' W., W. and WNW. wind and high sea; 37° 58' N., 50° W., severe hurricane. 6th, 48° 36' N., 27° 15' W., SE. and ESE. moderate breeze, high sea and rain. 2nd to 7th, lat. 36° 50' to 39° 44' N., long. 53° 16' to 63° 39' W., barometer 28.53 in., S. to WSW. gales, with heavy sea. 7th, 35° 30' N., 69° W., heavy NE. gale. 8th, 45° 29' N., 41° 19' W., W. and ESE. variable wind, very high cross-sea, cloudy and heavy rain; Str. "Anthenian", from Liverpool for Constantinople, capsized during heavy gale between 50 and 60 miles off Scilly. 9th, 48° 53' N., 39° 10' W., E. gale and high sea; 43° 26' N., 47° 30' W., fresh NNE. gale, heavy squalls and high sea; 43° 16' N., 47° 50' W., fresh ESE. and NE. gale, very high sea, heavy rain; 44° 43' N., 44° 32' W., fresh NE. gale and high sea. 10th, 42° 16' N., 54° 54' W., moderate NE. and N. gale, and very high sea. 17th, 43° 50' N., 46° 42' W., fresh westerly breeze to fresh gale and high sea; 45° 32' N., 43° 50' W., fresh NW. breeze and heavy squalls; 48° 05' N., 29° 00' W., SW. changeable winds, heavy squalls. 18th, 42° 08' N., 53° 21' W., and 43° 40' N., 48° 07' W., strong NW. gales, high seas; 36° 50' N., 57° W., SSE. gale, heavy squalls. 19th, 45° 21' N., 39° 15' W., WNW. heavy weather and sea; 50° 58' N., 13° 14' W., strong SSW. gale; 49° 38' N., 23° 07' W., SW. and NW. increasing wind and sea, moderate gale in morning. 20th, 43° 39' N., 48° 47' W., strong NE. to NW. gale and snow-storms; 43° 48' N., 45° 41' W., W. and SE. heavy weather and sea; 49° 08' N., 27° 41' W., hard NW. gale and heavy W. sea; 50° 39' N., 18° 08' W., variable winds, strong gale and high westerly sea; 48° 37' N., 28° 01' W., violent WNW., SW. and NW. gale, very high westerly sea. 21st, heavy gale along northern coast of Spain; 42° 30' N., 56° 14' W., NW. storm and rain; 50° 01' N., 22° 56' W., variable, strong gale and high westerly sea; 47° 06' N., 35° 19' W., NW. and SSE. gale. 22nd, 48° 53' N., 28° 08' W., variable winds, strong gales and high westerly sea; 45° 58' N., 38° 42' N., very heavy SW. and NW. gale, and tremendous NW. sea. 23rd, 48° 08' N., 35° 43' W., strong westerly gale; 47° 53' N., 33° 18' W., strong NNW. breeze and squally. 25th, 43° 00' N., 49° 19' W., W. to N. by W. strong gale; 44° 41' N., 43° 22' W., strong northerly gale, high westerly sea and terrific squalls. 27th., 47° 53' N., 33° 11' W., strong E. gale, high SE. sea.

Ice at Sea.—April 6th, steamer "Northern Light" 3 miles off Cariboo, N. S., in solid field of ice; passengers report Gulf of St. Lawrence and Straits of Northumberland full of ice as far as they could see. 10th, 30 miles east of N'f'd banks, large iceberg. 16th, 46° 45' N., 42° 21' W., very large iceberg. 17th, vessel from St. John's N'f'd, at Halifax, N. S., reports saw ice as far as eye could reach; whole of Cape Breton coast up to Canso blockaded. 18th, White Bay, N'f'd., steamer "Micmac" crushed in ice.

TEMPERATURE OF THE AIR.

The isothermal lines on chart No. II illustrate the general distribution of the temperature of the air for the month. Like the preceding month, the average of the mean temperatures is above that for years in every district, and mostly so in the Lake region, as will appear from a reference to the table on the left side of the same chart.

Minimum and Maximum Temperatures, respectively: *Maine*—at West Waterville, 29° and 65°; Orono, 30°, 68°. *New Hampshire*—Mt. Washington, 15°, 47°; Dunbarton, 34°, 71°. *Vermont*—Woodstock, 28°, 72°; West Charlotte, 36°, 82°. *Massachusetts*—Rowe, 32°, 64°; Somerset, 38°, 80°. *Rhode Island*—Chepachet, 32°, 74°; Newport, 35°, 67°. *Connecticut*—New London, 37°, 72°; Mystic, 36°, 78°. *New York*—Waterburg, 27°, 76°; Moriches, 42°, 78°. *New Jersey*—Vineland, 33°, 85°; Atco, 41°, 82°. *Pennsylvania*—Franklin, 24°, 78°; Cannonsburg, 32°, 89°. *Delaware*—Milford, 41°, 80°; Dover, 46°, 80°. *Maryland*—Woodstock, 34°, 79°; New Market, 40°, 86°. *District of Columbia*—Washington, 42°, 84°. *Virginia*—Wytheville, 31°, 83°; near Keswick Station, 44°, 88°. *West Virginia*—Helvetia, 30°, 86°; Morgantown, 32°, 89°. *North Carolina*—Highlands, 33°, 75°; Weldon, 45°, 90°. *South Carolina*—Aiken, 42°, 84°; Charleston, 46°, 84°. *Arkansas*—Mt. Ida, 38°, 88°; Judsonia, 50°, 85°. *Tennessee*—Knoxville, 37°, 82°; Austin, 42°, 86°. *Kentucky*—Danville, 41°, 80°; Louisville, 42°, 82°. *Ohio*—Lewisburg, 30°, 77°; Ringgold, 36°, 86°. *Indiana*—Richmond, 32°, 77°; St. Meinrad, 45°, 82°. *Michigan*—Fort Wayne, 21°, 73°; Detroit, 29°, 74°; Escanaba, 25°, 63°; Northport, 32°, 78°. *Wisconsin*—Neillsville, 15°, 75°; Embarrass, 30°, 78°; La Crosse, 35°, 77°. *Illinois*—Riley, 30°, 75°; Cairo, 44°, 83°; Anna, 46°, 85°. *Georgia*—Gainesville, 42°, 84°; Augusta, 45°, 89°. *Florida*—Milton, 50°, 86°; Okahumpka, 50°, 92°. *Alabama*—Montgomery, 45°, 88°; Mobile, 50°, 86°. *Mississippi*—Brookhaven, 44°, 79°; Vicksburg, 49°, 86°.